



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,262	07/11/2003	Gregory Allen Sotzing	UCT-0048	3919

23413 7590 05/11/2006

CANTOR COLBURN, LLP
55 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

EXAMINER

WONG, EDNA

ART UNIT	PAPER NUMBER
----------	--------------

1753

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,262

Applicant(s)

SOTZING, GREGORY ALLEN

Examiner

Edna Wong

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-17 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

This is in response to the Amendment dated March 23, 2006. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

Double Patenting

Claims **1-9 and 16-17** have been provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 20-23 of copending Application No. 10/193,598 (Sotzing et al.).

The rejection of claims 1-9 and 16-17 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 20-23 of copending Application No. 10/193,598 has been withdrawn.

Claim Rejections - 35 USC § 102

Claims **1-3 and 5-8** have been rejected under 35 U.S.C. 102(a) as being anticipated by **Lee et al.** ("Poly(thieno[3,4-b]thiophene). A New Stable Low Band Gap Conducting Polymer", *Macromolecules* (2001), Vol. 34, pp. 5746-5747).

The rejection of claims 1-3 and 5-8 under 35 U.S.C. 102(a) as being anticipated by Lee et al. has been withdrawn in view of Applicant's Declaration under 37 CFR § 1.132.

Claim Rejections - 35 USC § 103

I. Claims **4 and 9** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al.** ("Poly(thieno[3,4-b]thiophene). A New Stable Low Band Gap Conducting Polymer", *Macromolecules* (2001), Vol. 34, pp. 5746-5747) as applied to claims 1-3 and 5-8 above.

The rejection of claims 4 and 9 under 35 U.S.C. 103(a) as being unpatentable over Lee et al. as applied to claims 1-3 and 5-8 above has been withdrawn in view of Applicant's Declaration under 37 CFR § 1.132.

II. Claims **10-12** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al.** ("Poly(thieno[3,4-b]thiophene). A New Stable Low Band Gap Conducting Polymer", *Macromolecules* (2001), Vol. 34, pp. 5746-5747) as applied to claims 1-3 and 5-8 above, and further in view of **Lazzaroni et al.** (US Patent No. 4,663,001).

The rejection of claims 10-12 under 35 U.S.C. 103(a) as being unpatentable over Lee et al. as applied to claims 1-3 and 5-8 above, and further in view of Lazzaroni et al. has been withdrawn in view of Applicant's Declaration under 37 CFR § 1.132.

III. Claims **13 and 14** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al.** ("Poly(thieno[3,4-b]thiophene). A New Stable Low Band Gap Conducting Polymer", *Macromolecules* (2001), Vol. 34, pp. 5746-5747) as applied

to claims 1-3 and 5-8 above, and further in view of **Lazzaroni et al.** (US Patent No. 4,663,001) as applied to claims 10-12 above, and further in view of **Jonas et al.** (US Patent No. 4,959,430) ['430].

The rejection of claims 13 and 14 under 35 U.S.C. 103(a) as being unpatentable over Lee et al. as applied to claims 1-3 and 5-8 above, and further in view of Lazzaroni et al. as applied to claims 10-12 above, and further in view of Jonas et al. has been withdrawn in view of Applicant's Declaration under 37 CFR § 1.132.

IV. Claim **15** has been rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al.** ("Poly(thieno[3,4-b]thiophene). A New Stable Low Band Gap Conducting Polymer", *Macromolecules* (2001), Vol. 34, pp. 5746-5747) as applied to claims 1-3 and 5-8 above, and further in view of **Lazzaroni et al.** (US Patent No. 4,663,001) as applied to claims 10-12 above, and further in view of **Jonas et al.** (US Patent No. 4,910,645) ['645].

The rejection of claim 15 under 35 U.S.C. 103(a) as being unpatentable over Lee et al. as applied to claims 1-3 and 5-8 above, and further in view of Lazzaroni et al. as applied to claims 10-12 above, and further in view of Jonas et al. has been withdrawn in view of Applicant's Declaration under 37 CFR § 1.132.

V. Claims **16 and 17** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al.** ("Poly(thieno[3,4-b]thiophene). A New Stable Low Band

Art Unit: 1753

Gap Conducting Polymer", *Macromolecules* (2001), Vol. 34, pp. 5746-5747) as applied to claims 1-3 and 5-8 above, and further in view of **Jonas et al.** (US Patent No. 5,300,575) ['575].

The rejection of claims 16 and 17 under 35 U.S.C. 103(a) as being unpatentable over Lee et al. as applied to claims 1-3 and 5-8 above, and further in view of Jonas et al. has been withdrawn in view of Applicant's Declaration under 37 CFR § 1.132.

Response to Amendment

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 and 16-17 are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 20-23 of copending Application No. 10/193,598 in view of **Wei et al.** (US Patent No. 4,986,886).

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

reacting thieno[3,4-b]thiophene in the presence of a polyanion and an oxidant under reaction conditions sufficient to form the polymer comprising polymerized units of thieno[3,4-b]thiophene.

The invention claimed in claims 1-9 and 16-17 of the instant application fail to be patentably distinct from the invention claimed in claims 20-23 of the copending application because the independent claims in the instant application recite similar limitations, either alone or in combination with their dependent claims, as that of the claims in the copending application wherein the claims in the instant application are encompassed by the claims in the copending application. Therefore, the claims would have been an obvious variant over each other.

The reacting recited in claim 20 of the copending application is the genus to the species of electrochemically reacting in claim 1 of the instant application.

The oxidant recited in claim 20 of the copending application is the same as the anode of the electrochemically reacting recited in claim 1 of the instant application, or

the oxygen in the air of an open electrochemical cell.

Applicants state that chemical oxidation and electrochemical oxidation are two different types of reactions. In chemical oxidation reactions, both oxidizing agent and reducing agent have to be present. On the other hand, no oxidizing agent is necessary in electrochemical reactions and the oxidation is achieved by a working electrode. Moreover, oxidation reaction conditions such as temperature, reaction time, and additional reactants can be very different between chemical and electrochemical reactions.

In response, claim 20 of the copending application does not specifically recite that the “reacting” is a -- chemically reacting --, and the “reaction conditions” are opened to electrochemical reaction conditions. Furthermore, Wei teaches that chemical oxidation and electrochemical oxidation of monomers are obvious variants in polymerization (col. 1, lines 35-47).

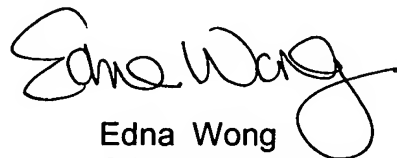
This is a provisional obviousness-type double patenting rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Edna Wong", with a stylized flourish at the end.

Edna Wong
Primary Examiner
Art Unit 1753

EW
May 7, 2006